

Robins Drinking Water Safe!



WATER QUALITY REPORT 2016

Robins Air Force Base Water System Permit No. 1530042

Robins AFB Drinking Water Program

This Water Quality Report summarizes the quality of your drinking water during calendar year 2016. Robins Air Force Base (Robins AFB) met all parameters set by the Georgia Environmental Protection Division (EPD) and the US Environmental Protection Agency (EPA) for the period of Jan 2016 to July 2016 and Sept 2016 to Dec 2016. Our water system had an administrative/procedural failure and failed to submit samples for bacteriological analysis during the month of Aug 2016. See the “Notification of Non-Compliance” section for more information. Incorporated in this report you will find detailed information about these standards and our efforts to meet them.

This report also provides detailed accounts of the detected water monitoring and testing results gathered from January to December 2016 for the Robins AFB Public Water System. Details about where your water originates, what it contains and how it compares to standards set by regulatory agencies is included. The purpose of this report is to advise consumers about drinking water quality and heighten awareness of the need to protect precious water resources. The report reflects the hard work and dedication of the 78th Civil Engineer Squadron, who operates and maintains the water distribution and treatment systems and the 78th Medical Group, who tests the drinking water for safety and quality.

To comply with the Consumer Confidence Reporting Rule of the Federal Safe Drinking Water Act, the 78th Medical Group Bioenvironmental Engineering Flight issues this annual report on drinking water monitoring results. For additional information about this report or to provide input regarding the Robins AFB public water system, contact the Robins AFB Bioenvironmental Engineering Office at 478-327-7555. Base organizations who manage the water system have an open door policy with our residents.



Our Raw Water Source

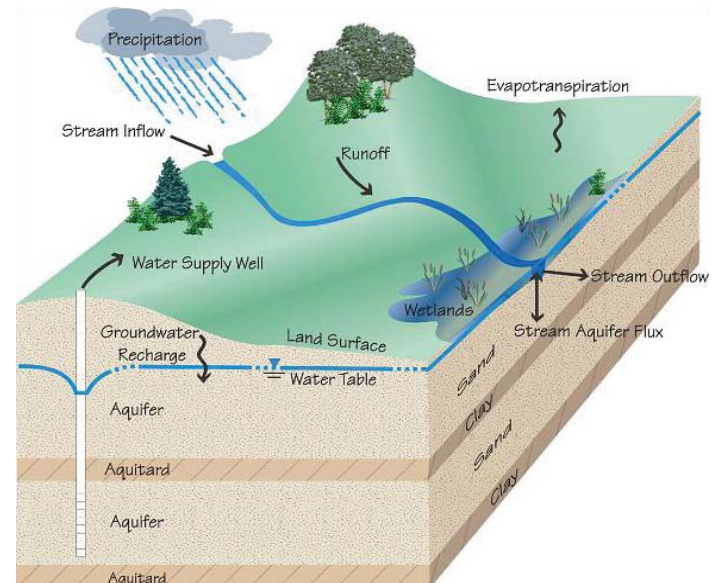
Our drinking water is drawn from the Blufftown Aquifer, one of the best groundwater sources in the State. This is a safe and reliable source that provides high-quality water that is free of micro-organisms, such as Giardia and Cryptosporidium that are sometimes found in rivers and lakes.

Rain water percolates down into the Blufftown Aquifer through layers of soil and sand, which act as natural cleansing filters to remove impurities. At Robins AFB, the drinking water aquifer is located over 300 feet below the ground surface and is separated from surface water by several thick clay layers. Robins AFB is permitted to withdraw water through the seven water supply wells located throughout the base, one of which is currently inactive.

Public water systems are required to develop a Source Water Assessment Plan (SWAP) to identify potential contamination sources and review the controls to mitigate potential impacts. Management strategies to control current and future potential contamination sources have been identified and implemented. These controls are designated as adequate to protect our drinking water supply. Contact Bioenvironmental Engineering at 478-327-7555 if you have questions regarding the SWAP.

Reduced Monitoring Approved

The Source Water Assessment and Vulnerability Assessment show the Robins AFB water system’s raw water is not in a high potential pollution risk status. GA EPD has authorized reduced monitoring requirements for certain contaminants in our system to less than once per year because their concentrations have been very stable over many years and the history of testing has shown no levels of concern. Reduced monitoring requirements, called waivers, have been issued to our drinking water system for arsenic, asbestos and cyanide, as well as 31 synthetic organic compounds, effective 1 January 2014 to 31 December 2016. Please contact the Robins AFB Bioenvironmental Engineering Office at 478-327-7555 if you have questions about drinking water waivers or wish to receive a copy.



Our Treatment System

A variety of techniques are used to treat your tap water, including chlorination disinfection as well as fluoridation to protect children’s teeth. The water also goes through a softening process by adding a corrosion inhibitor and soda ash. The water treatment operation is staffed by highly trained, state-licensed water treatment plant operators. Our water system has storage capacity of over 2 million gallons, a pumping capacity of 10.4 million gallons per day and uses advanced technology to monitor and control drinking water distribution 24 hours per day. During 2016, nearly 580 million gallons of water was distributed to Robins AFB consumers. Our operations staff work diligently 365 days per year to

Who needs to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Environmental Protection Agency/Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

Complaints regarding color, taste, or odor?
Please call The 78 Civil Engineering Service Desk at 478-926-5657.

If you have questions concerning the contents of this report,
please contact SrA Arina Chambers, 78 AMDS/SGPB at 478-327-7555.

Notification of Non-Compliance

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the month of Aug 2016, we did not submit samples to GA EPD for bacteriological analysis and therefore cannot be sure of the quality of the drinking water during that time. Although the EPD-required samples were missed, 17 samples analyzed by the Bioenvironmental Engineering Flight were negative for contamination in Aug 2016 and regular sample submissions resumed in Sep 2016. We have adjusted administrative procedures and increased sampling activity oversight to prevent any future missed sampling. There are no known long-term health effects associated with microbial contamination and short-term effects may consist of diarrhea, cramps, nausea and headaches. Anyone consuming contaminated water is susceptible but infants, young children and individuals with compromised immune systems are particularly vulnerable. For further information please contact SrA Chambers at the number above. You are encouraged to share this information with other people who drink this water, especially those who may not have seen this notice.

Information About Total Coliforms

Coliforms are bacteria that are naturally present in the environment and used as an indicator that other, potentially harmful, bacteria may be present. Fecal coliform and *E. coli* are bacteria whose presence indicates that water may be contaminated by human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

In addition to the required monthly total coliforms sampling, the Bioenvironmental Engineering Flight conducts in-house total coliform monitoring at 25 locations, analyzing over 300 samples per year to ensure the water is safe to drink on Robins AFB.

Emerging Contaminants

Chemicals that are recognized as a potential threat to human health or the environment but lack a published health standard are known as “emerging contaminants.” Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are two perfluorinated chemicals (PFCs) that have been produced in large quantities in the United States. These organic compounds are very persistent in the environment and resistant to degradation. This means that once introduced in the ground water, they will not naturally degrade quickly and require active treatment for removal. Animal studies have shown potential developmental, reproductive and systemic effects. Due to the recognition of the hazards presented by these chemicals, the Department of Defense added PFOS and PFOA to water sampling schedules this year. All results were below detectable limits; therefore, PFOS/PFOA do not present a hazard in our drinking water system.

Water Quality Data 2016

Contaminant	Units	MCL	MCLG	Average (Results)	Range	Year Sampled	Violation	Typical Source
Inorganic								
Chlorine	ppm	MRDL=4	MRDLG=4	1.48 ^b	0.41-3.1	2016	No	Water additive used to control microbes
Fluoride	ppm	4	4	0.9 ^b	0.7-1.1	2016	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate/Nitrite	ppm	10	10	0.37	ND-0.71	2016	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
Copper	ppb	AL=1300	1300	The 90th percentile = 240 Zero out of 20 samples were found to have copper levels in excess of the AL of 1300 ppb		2016	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead	ppb	AL=15	0	The 90th percentile = 1.4 Zero out of 20 samples were found to have lead levels in excess of the AL of 15 ppb		2016	No	
Volatile Organic								
Tetrachloroethylene	ppb	5	0	0.66 ^c	0.61-0.72	2016	No	Discharge from metal degreasing sites and other factories
Disinfection By-Products								
Chloroform	ppb	N/A	N/A	1.8	ND-1.8	2016	No	By-product of drinking water disinfection
Total Trihalomethanes	ppb	80	N/A	1.8	N/A	2016	No	
Microbiological								
Total Coliform	N/A	1 ^a	0	0 ^a	N/A	2016	No	Naturally present in the environment
Radioactive								
Combined Radium	pCi/L	5	0	0.42	ND-1.27	2015	No	Erosion of natural deposits

a. The MCL for total coliform bacteria is based on the presence or absence of total coliforms in a sample.
b. Reported the annual average of monthly fluoride/chlorine results.
c. The detection of Tetrachloroethylene at Well 1, although below the MCL, has triggered increased monitoring to quarterly sampling. This quarterly monitoring will continue until this compound can be proven to be consistently and reliably detected below the MCL.

Table Definitions

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

ppm: parts per million
ppb: parts per billion
pCi/L: picocuries per liter (a measure of radioactivity)

Notes About Contaminants

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, naturally occurring radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in any source water BEFORE it is treated include:

- **Microorganisms contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, that can be naturally occurring, or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, or residential uses.
- **Organic chemicals contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants**, which may be naturally-occurring, or be the result of oil and gas production and mining activities.

Most surface water contaminants never reach the drinking water supply. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the US EPA’s Safe Drinking Water Hotline at 800-426-4791.

Required Consumer Confidence Report Statement Addressing Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Robins AFB is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791), or at <http://www.epa.gov/safewater/lead>.